

REMARKS

This Response to Non-Final Office Action is being submitted in response to the non-final Office Action mailed January 23, 2006. Claims 15-31 are pending in the Application.

The Drawings stand objected to under 37 CFR 1.121(d) and Claims 15-21 and 23-30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ye et al. (US 6,417,965) in view of Kinoshita et al. (US 2002/0001124).

Claims 22 and 31 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response to these rejections and objections, reconsideration of the Application is respectfully requested in view of the following remarks.

Objection to the Drawings:

The Drawings stand objected to under 37 CFR 1.121(d). Specifically, Examiner indicates that, referring to Figures 3 and 7, there is no independent variable, nor a unit of measure.

In response to this objection, Figures 3 and 7 have been amended to incorporate time (T) as the independent variable, time (T) having an appropriate unit of measure, such as seconds. It should be noted that Figure 7 previously incorporated several specific values of time ($t_0 - t_4$) for the independent variable.

Therefore, Applicants respectfully request that the objection to the Drawings under 37 CFR 1.121(d) now be withdrawn.

Rejection of Claims 15-21 and 23-30 Under 35 U.S.C. 103(a) - Ye et al. in view of Kinoshita et al.:

Claims 15-21 and 23-30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ye et al. (US 6,417,965) in view of Kinoshita et al. (US 2002/0001124). Specifically, Examiner indicates that, at Figure 7 and Column 9, line 66 - Column 10, line 30, Ye et al. teach a controlling device configured for operating an optical amplifying device in one of a gain threshold mode and a constant gain mode, said controlling device further configured for switching the optical amplifying device from operating in the gain threshold mode to operating in the constant gain mode when an absolute value of a gain error exceeds a gain threshold, wherein the gain error is the difference between a target gain and a gain of the optical amplifying device.

Applicants, however, respectfully disagree regarding what is taught by Ye et al. at Figure 7 and Column 9, line 66 - Column 10, line 30. These portions of the reference teach that a controller (236) reads the digital signals from two analog-to-digital converters (232 and 233) and selects a signal from one or the other based on the saturation state of each. This selected signal is used to generate a control signal, via a look-up table, equation/algorithm, etc., for adjusting one or more operating parameters of an optical amplifier stage (240). The control signal is used to control the optical amplifier stage (240) to “**maintain a constant gain per channel in the amplified output signal**” (Column 10, lines 25-27) or for other purposes. Thus, at most, the reference teaches the “**constant gain mode**” of the present invention, whereby gain is held constant while output power may vary, which is used to deal with significant transient events, for example, as described at Column 5, lines 4-16.

There is no hint or suggestion in the reference of the “**gain threshold mode**” of the present invention, whereby gain and output power are held constant, used when the optical amplifier system as a whole is “stable” to flatten out “drift” in the output power,

nor of selectively switching back-and-forth between the two modes based on a thresholding method, as disclosed and claimed.

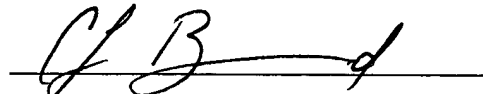
Therefore, Applicants respectfully request that the rejection of Claims 15-21 and 23-30 under 35 U.S.C. 103(a) as being unpatentable over Ye et al. in view of Kinoshita et al. now be withdrawn.

CONCLUSION

Applicants would like to thank Examiner for the attention and consideration accorded the Application. Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

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